

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 January 2004 (29.01.2004)

PCT

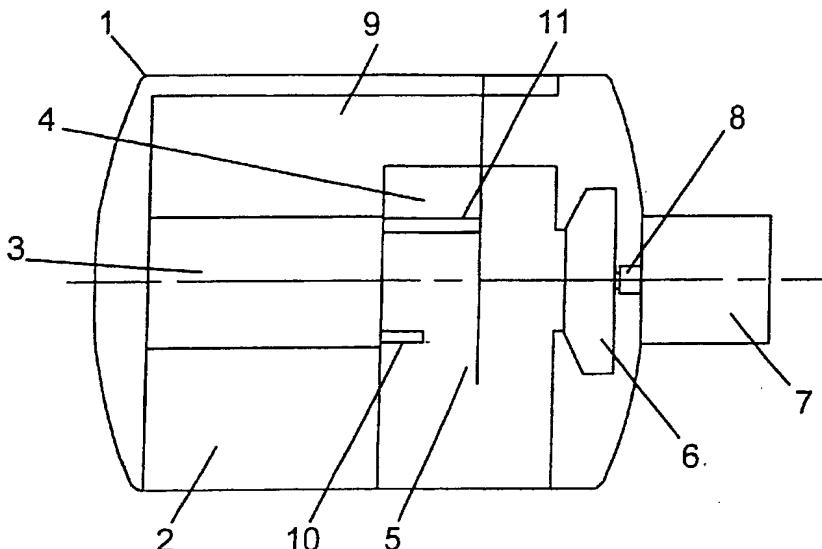
(10) International Publication Number
WO 2004/009203 A1

- (51) International Patent Classification⁷: **B01D 1/28.** (81) Designated States (*national*): AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO (utility model), CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT (utility model), RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (21) International Application Number: **PCT/NZ2003/000160**
- (22) International Filing Date: 23 July 2003 (23.07.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
520365 24 July 2002 (24.07.2002) NZ
- (71) Applicant (*for all designated States except US*): DIS-TECH LIMITED [NZ/NZ]; 62 Lunn Avenue, Mt Wellington, 1006 Auckland (NZ).
- (72) Inventor; and
- (75) Inventor/Applicant (*for US only*): FORSYTH, John, David [NZ/NZ]; 30 Dominion Road, 1890 Tuakau (NZ).
- (74) Agent: BALDWIN SHELSTON WATERS; P O Box 5999, Wellesley Street, 1000 Auckland (NZ).
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

[Continued on next page]

(54) Title: VACUUM SEALING ARRANGEMENT FOR A LIQUID CONCENTRATOR



(57) **Abstract:** The liquid concentrator has a vacuum vessel or chamber (1) in which a required vacuum is established. Within the common vessel or chamber (1) are provided concentrator components including a feed section (2), an evaporation plus condensing/section (3), a separation area (4), a baffle arrangement (5) and a vapour compressor (6). A seal (8) may be provided for the connection between the compressor (6) and a motor (7) mounted externally of the vessel or chamber (1). In another embodiment the motor (7) may also be mounted within the vessel or chamber (1). The invention avoids the cost and complexity of providing separate vacuum seals for each of the concentrator components.

WO 2004/009203 A1